

No.

8100044



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

L. D. Maffei Seed Company, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (8 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LIMA BEAN

'Maffei 8'



Attest:

Edward L. Lane
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 16th day of April in the year of our Lord one thousand nine hundred and eighty-one.

John R. Block
Secretary of Agriculture

UNITED STATES DEPARTMENT OF JUSTICE

IN RE: [Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible text block]

[Illegible]

[Illegible]

[Illegible text block]



[Illegible text block]

EXHIBIT A. Origin and Breeding History.

Maffei 8 is a sister line of Maffei 76. It originated from the breeding line B2C a joint release of the AR-SEA-USDA and the Delaware Agriculture Experiment Station, carrying resistance to Downy Mildew races A to D.

Maffei 8 was identified by Maffei Seed Company researchers in 1975 as the most promising of several selections from B2C developed by the Company for larger plant size and greater drought tolerance than could be expected from Maffei 76. Subsequent selection for uniformity lead to a seed increase planting of 1.5 acres om 1979 that was clearly distinctive and worthy of release.

Only one noteworthy variant is known to occur, that being up to three percent of the plants having plain rather than mottled or variegated primary leaves. The mottled pattern is produced by a single recessive gene.

Stability is indicated by the uniformity of plants and seeds of the 1979 and 1980 crops.

EXHIBIT B. Novelty Statement.

Maffei 8 most closely resembles Maffei 76 but differs in having mottled or variegated primary leaves whereas those of Maffei 76 are plain; less grayish color in the trifoliolate leaves (147A on the Royal Horticultural Society Color Chart) than those of Maffei 76, which are distinctly grayish green (189A); and larger plant size as shown by the following data from a 4-replicate variety trial:

<u>VARIETY</u>	<u>FRESH WT. (TONS/A)</u>	<u>STD. ERROR</u>
Maffei 8	18.8	1.3
Maffei 76	13.7	1.8

Maffei 8 differs from Bridgeton primarilly in being resistant to Downy Mildew Strains A ~~to~~ D whereas Bridgeton is susceptible to Strains C and D. *thru let 810305*

Maffei 8 differs from C-elite in being taller (36.1- 1.3 Cm vs 31.2- 0.8 Cm at early bloom stage). Maffei 8 also tends to maintain its upright architecture much more than C-elite, C-elite is susceptible to Downy Mildew Strain D; and C-elite has grayish-green leaves closely resembling those of Maffei 76.

UNITED STATES
FEDERAL BUREAU OF INVESTIGATION
COMMUNICATIONS SECTION
WASHINGTON, D.C. 20535

1

FILE

JAN 26 1981

25% COTTON FIBRE

12. INSECT RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="text" value="0"/> APHIDS	<input type="text" value="0"/> LEAF HOPPERS	<input type="text" value="0"/> POD BORER	<input type="text" value="0"/> LYGUS
<input type="text" value="0"/> THRIPS	<input type="text" value="0"/> WEAVILS	<input type="text" value="0"/> SEED CORN MAGGOT	<input type="text"/> OTHER (Specify) _____

13. PHYSIOLOGICAL RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="text" value="2"/> HEAT	<input type="text" value="0"/> COLD	<input type="text" value="2"/> DROUGHT	<input type="text"/> OTHER (Specify) _____
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REFERENCES

The following publications may be used as references in completing this form:

1. Beans of New York. Vol. 1 Part II of Vegetables of New York. U.P. Hedrick et al. J. B. Lyon Company, Albany, N.Y. 1931.
2. Yarnell, S. H., Cytogenetics of the Vegetable Crops IV. Legumes. Bot. Rev. 31:247 - 330. 1965.
3. USDA Yearbook of Agriculture. 1937.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.

COMMENTS:

JAN 26 1981

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

DEC 23 1980
2:30 pm.

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

JAN 26 1981

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY MAFFEI 8		1b. VARIETY NAME Maffei 8		FOR OFFICIAL USE ONLY PV NUMBER 8100044	
2. KIND NAME Lima Bean		3. GENUS AND SPECIES NAME Phaseolus lunatus		FILING DATE 1/26/81	TIME 2:30 A.M.
4. FAMILY NAME (BOTANICAL) FABACEAE		5. DATE OF DETERMINATION Sept. 1, 1979		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 1/26/81 3/16/81
6. NAME OF APPLICANT(S) L. D. Maffei Seed Co., Inc.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 903 Newman, CA 95360		8. TELEPHONE AREA CODE AND NUMBER (209) 862-2841	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION California		11. DATE OF INCORPORATION 1961	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Dr. Vernon J. Fisher, L. D. Maffei Seed Co., Inc. Box 903, Newman, CA 95360					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

L. D. Maffei Seed Co., Inc.

Robert L. Maffei
(SIGNATURE OF APPLICANT)
Robert L. Maffei, President

(DATE)

(DATE)

(SIGNATURE OF APPLICANT)

OBJECTIVE DESCRIPTION OF VARIETY

LIMA BEAN (PHASEOLUS LUNATUS)

REFERENCES: See Reverse.

NAME OF APPLICANT(S) L. D. Maffei Seed Co., Inc.	FOR OFFICIAL USE ONLY PVPO NUMBER 8100044
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 903 Newman, CA 95360	VARIETY NAME OR TEMPORARY DESIGNATION Maffei 8

Place the appropriate number that describes the varietal character of this variety in the boxes below:
Place a zero in first box (e.g. or) when number is either 99 or less or 9 or less.

1. TYPE:

1 = GREEN SHELL 2 = DRY EDIBLE 3 = DUAL PURPOSE

2. REGION OF ADAPTABILITY IN THE U.S.:

Best adapted in: 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST
5 = SOUTHWEST 6 = MOST REGIONS

3. MATURITY (Days from seeding to first harvest):

GREEN SHELLS DRY SEEDS

No. of days Earlier than: 1 = HENDERSON BUSH 2 = THAXTER 3 = BURPEE'S IMPROVED BUSH
4 = SIEVA 5 = FLORIDA BUTTER 6 = KING OF THE GARDEN

No. of days Later than: 7 = OTHER (Specify) Maffei 76

4. PLANT:

1 = DETERMINATE, ERECT BUSH 2 = DETERMINATE, SPRAWLING BUSH 3 = DETERMINATE, SEMIPOLE
4 = INDETERMINATE, POLE

CM. HEIGHT CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

CM. SPREAD NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

Main stalk: 1 = BRITTLE 2 = WIREY Main stalk: 1 = STOUT 2 = THIN

Flower position: } 1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

Pod position: }

5. LEAVES:

1 = SMOOTH 2 = WRINKLED 1 = DULL 2 = GLOSSY Thickness: 1 = THIN 2 = MEDIUM 3 = THICK

Size: 1 = SMALL (Sieva) 2 = MEDIUM 3 = LARGE (Prizetaker) CM. PETIOLE LENGTH (To basal leaflets of first trifoliate leaf)

Tip shape of center leaflet: 1 = ROUNDED 2 = TAPER POINTED 3 = SHARP POINTED

PUBESCENCE - Dorsal: } 1 = NONE 2 = SLIGHT 3 = CONSIDERABLE

PUBESCENCE - Ventral: }

Color: 1 = GRAY GREEN 2 = MEDIUM GREEN (Burpee's Improved Bush) 3 = DARK GREEN (Sieva)

6. FLOWERS:

Color: 1 = WHITE 2 = CREAM 3 = PINK 4 = LILAC 5 = PURPLE 6 = OTHER (Specify) _____

Racemes: CM. TO BASE OF TERMINAL FLORET NUMBER FLOWERS PER RACEME

7. FRESH PODS:

3 Color: 1 = LIGHT GREEN (Thaxter) 2 = MEDIUM GREEN (Florida Butter) 3 = DARK GREEN (Thorogreen Early)
4 = OTHER (Specify) _____

0 7 CM. LENGTH 1 8 MM. WIDTH (Between sutures) 0 8 MM. THICKNESS 2 3 $\frac{\text{WIDTH}}{\text{THICKNESS}} \times 10$

2 Cross section pod shape: 1 = FLAT 2 = OVAL 3 = ROUND 2 Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED
3 = CURVED

6 MM. SPUR LENGTH 1 Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

2 Surface: 1 = SHINY 2 = DULL 1 Surface: 1 = SMOOTH 2 = BLISTERED

2 Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE 3 NUMBER OF SEEDS PER POD

5 4 NUMBER PODS PER PLANT (Once over harvest) 1 Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

Condition of pods at once-over harvest: 1 0 % DRY 0 0 % YELLOW 9 0 % GREEN

8. SEEDS:

12 810225 1 = MONOCHROME 2 = POLYCHROME 2 1 = SHINY 2 = DULL

0 3 Primary color: 1 = WHITE 2 = GREENISH WHITE 3 = GREEN 4 = YELLOW 5 = BUFF 6 = TAN
Secondary color: 7 = BROWN 8 = PINK 9 = RED 10 = PURPLE 11 = BLACK 12 = OTHER (Specify) _____

Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

Secondary color location: 1 = HILAR RING 2 = HILAR SURFACE 3 = STROPHIOLE 4 = MICROPYLE 5 = SIDES
6 = DORSAL SURFACE 7 = NOT RESTRICTED TO ANY AREA
8 = COMBINATION OF LOCATIONS (Specify) _____

1 Hilar ring: 1 = NOT PRESENT 2 = NARROW 1 Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT
3 = WIDE 4 = BUTTERFLY SHAPED

2 Cotyledon color: 1 = WHITE 2 = PALE GREEN 3 = GREEN 1 Seed coat 1 = SMO 2 = WRN

9. SEED SHAPE AND SIZE:

3 Hilum view: 1 = FLAT 2 = ELLIPTICAL 1 Side view: 1 = OVAL 2 = ROUND
3 = OVAL 4 = ROUND 3 = KIDNEY 4 = TRUNCATE ENDS

2 Cross section: 1 = FLAT 2 = ELLIPTICAL 3 = OVAL 3 5 GM. WEIGHT PER 100 SEEDS
4 = ROUND

1 Classification: 1 = SIEVA 2 = INTERMEDIATE 3 = FORDHOOK

0 9 MM. WIDTH (Dorsal to ventral) 0 5 MM. THICKNESS (Side to side)

1 2 MM. LENGTH 1 9 $\frac{\text{WIDTH}}{\text{THICKNESS}} \times 10$

10. ANTHOCYANIN: (1 = Absent, 2 = Present)

1 FLOWERS 1 STEM 1 PODS 1 SEEDS 1 LEAVES

11. DISEASE RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

0 RUST (Specify race) _____	0 ANGULAR LEAF SPOT	0 BACTERIAL WILT
0 COMMON BEAN MOSAIC	0 ANTHRACNOSE	0 LIMA BEAN MOSAIC
0 SOUTHERN BEAN MOSAIC	0 FUSARIUM ROOT ROT	0 CURLY TOP
0 N.Y. 15 BEAN MOSAIC	2 DOWNY MILDEW	0 POWDERY MILDEW
0 BEAN MOSAIC VIRUS 4	0 HALO BLIGHT	0 FUSCOUS BLIGHT
0 ALFALFA MOSAIC VIRUS	0 ALFALFA MOSAIC VIRUS 2	0 POD MOTTLE VIRUS
0 RED NODE VIRUS	0 ROOT KNOT NEMATODE	0 OTHER (Specify) _____

JAN 26 1981